I. Claim Rejections und r 35 U.S.C. § 102(e)

The Examiner rejected claims 1-5 and 7-21 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,388,299 ("Kang"). Claims 1, 15, 16, and 19 have been amended to clarify that the contactless acceleration switch system turns on when a threshold acceleration value is detected. The Applicant respectfully traverses these rejections.

In claim 1, the Applicant recites a contactless acceleration switch system. The contactless acceleration switch system includes a substrate layer containing a source, a drain, and a threshold adjustment channel. Additionally, the contactless acceleration switch system includes at least two insulator posts. The source, drain and threshold adjustment channel are located between the two insulator posts. Further, the contactless acceleration switch system includes a mass and a spring. The spring is attached to the two insulator posts and supports the mass above the substrate layer. The contactless acceleration switch system turns on when a threshold acceleration value is detected. Accordingly, the contactless acceleration switch system provides on-off switching without the need for metal contacts. (See, Applicant's Specification, page 10, lines 2-3.)

In contrast, Kang teaches a sensor device that provides a relatively uniform electric field between a diaphragm and a substrate. (See, e.g., Kang, Abstract.) The diaphragm includes an upper support member and a lower electrode plate. (See, e.g., Kang, Abstract.) The upper support member is not attached to insulator posts. (See, e.g., Kang, Figs. 3-8.) Additionally, the lower electrode plate is used to generate a uniform electric field, and not as a weight. Further, Kang teaches that the sensor device turns on when a threshold pressure is applied to the device, not when a threshold acceleration value is detected. (See, e.g., Kang, column 7, lines 21-27.) Because Kang fails to suggest at least two insulator posts, a mass, and turning on when a threshold acceleration

value is detected, Kang does not suggest all the claim limitations of claim 1. Thus, the Applicant submits that Kang does not anticipate claim 1.

Claims 2-5 and 7-21 depend from claim 1. Accordingly, the Applicant also submits that Kang does not anticipate claims 2-5 and 7-21.

II. Claim Rejections under 35 U.S.C. § 102(b)

The Examiner rejected claims 1 and 5 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,627,397 ("Kano"). Claim 1 has been amended to clarify that the contactless acceleration switch system turns on when a threshold acceleration value is detected. The Applicant respectfully traverses these rejections.

Kano teaches a semiconductor acceleration sensor having two transistor structures. (See, e.g., Kano, Abstract.) The current flowing between the first and second transistors are mutually reversed in phase in accordance to the displacement of the weight section. (See, e.g., Kano, column 2, lines 15-20.) For example, if the acceleration sensor is subjected to acceleration, current flowing through one transistor decreases, while current flowing through the other transistor increases. (See, e.g., Kano, column 5, lines 27-47.) Accordingly, Kano's acceleration sensor provides a continuous, non-linear output representative of the amount of current flowing through the first and second transistors. Thus, Kano teaches an acceleration sensor, and not an acceleration switch. Because Kano fails to suggest an acceleration switch that turns on when a threshold acceleration value is detected, Kano does not suggest all the claim limitations of claim 1. Thus, the Applicant submits that Kano does not anticipate claim 1.

Claim 5 depends from claim 1. Accordingly, the Applicant also submits that Kano does not anticipate claim 5.

III. Claim Rejections under 35 U.S.C. § 103(a)

The Examiner rejected claims 6 and 22 under 35 U.S.C. § 103(a) as being unpatentable over Kano. The Applicant respectfully traverses these rejections. Claim 6 depends from claim 1. As described above, Kano teaches an acceleration sensor, and not an acceleration switch. Accordingly, the Applicant also submits that Kano does not anticipate claim 6.

In Claim 22, the Applicant recites that an air gap is located between the mass and the silicon substrate layer when an acceleration level is below a threshold acceleration value and the mass moves towards the silicon substrate layer when the threshold acceleration value is detected. Accordingly, the contactless acceleration switch system provides on-off switching without the need for metal contacts. As described above, Kano teaches an acceleration sensor, and not an acceleration switch. Thus, the Applicant also submits that Kano does not anticipate claim 22.

IV. Summary

In view of the above amendments and remarks, the Applicant respectfully submits that the present application is in condition for allowance and respectfully requests notice to this effect. If there are any additional matters that may be resolved or clarified through a telephone interview, the Examiner is requested to contact the Applicant's undersigned representative.

Respectfully submitted,

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Marked-Up Copy of Claims
Pursuant to 37 C.F.R. § 1.121(c)(ii)

1. (Amended) A contactless acceleration switch system, comprising in combination:

a substrate layer containing a source, a drain, and a threshold adjustment channel;

a gate insulating layer located substantially above the source, the drain, and the threshold adjustment channel;

at least two insulator posts, wherein the source, the drain, the threshold adjustment channel, and the gate insulating layer are located substantially between the at least two insulator posts;

a mass; and

a spring substantially supporting the mass above the substrate layer, wherein the spring is attached to each of the at least two insulator posts**, and wherein the contactless acceleration switch system turns on when a threshold acceleration value is detected**.

15. (Amended) The system of Claim 1, wherein an air gap is located substantially between the mass and the substrate layer when an acceleration level is substantially below **[**a**]** **the** threshold acceleration value.

16. (Amended) The system of Claim 1, wherein the mass moves substantially towards the substrate layer when **[**a**]** **the** threshold acceleration value is detected.

19. (Amended) The system of Claim 1, wherein the source and the drain act as electrodes providing an electrical signal that indicates that **[**a**]** **the** threshold acceleration value is detected.